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M A R 2 1 2005  
P A T E N T & T R A D E M A R K O F F I C E

## TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

		Application Number	09/943,685
		Filing Date	August 30, 2001
		First Named Inventor	Loughrin et al
		Art Unit	3679
		Examiner Name	Aaron M. Dunwoody
Total Number of Pages in This Submission		Attorney Docket Number	6039-000293

**ENCLOSURES (check all that apply)**

<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to Technology Center (TC)
<input checked="" type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment / Reply	<input type="checkbox"/> Petition	<input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Certified Copy of Priority Document(s)		
<input type="checkbox"/> Response to Missing Parts/ Incomplete Application		
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53		

## Remarks

The Commissioner is hereby authorized to charge any additional fees that may be required under 37 CFR 1.16 or 1.17 to Deposit Account No. 08-0750. A duplicate copy of this sheet is enclosed.

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm or Individual name	Harness, Dickey & Pierce, P.L.C.	Attorney Name	Reg. No.
Signature			
Date	March 21, 2005		

**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Typed or printed name	W. R. Duke Taylor	Express Mail Label No.	EV 570 162 692 US (3/21/2005)
Signature		Date	March 21, 2005

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.4. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

EV 570 162 692 US



# FEE TRANSMITTAL for FY 2005

Effective 10/01/2004. Patent fees are subject to annual revision.

 Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 500)

## Complete If Known

Application Number	09/943,685
Filing Date	August 30, 2001
First Named Inventor	Loughrin et al
Examiner Name	Aaron M. Dunwoody
Art Unit	3679
Attorney Docket No.	6039-000293

## METHOD OF PAYMENT (check all that apply)

Check  Credit card  Money  Other  None  
Order

 Deposit Account:

Deposit Account Number	08-0750
Deposit Account Name	Harness, Dickey & Pierce, PLC

## The Director is authorized to: (check all that apply)

- Charge fee(s) indicated below  Credit any overpayments  
 Charge any additional fee(s) or any underpayment of fees under 37 CFR 1.16 and 1.17  
 Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

## FEE CALCULATION

## 1. BASIC FILING FEE

Large Entity	Small Entity	Fee Description	Fee Paid
Fee Code	Fee Code (\$)	Fee (\$)	
1001	790	2001	395
1002	350	2002	175
1003	550	2003	275
1004	790	2004	395
1005	160	2005	80
SUBTOTAL (1)		(\$ 0)	

## 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims	-20 **	=	0	X	0	=	0	Fee from below	Fee Paid
Independent Claims	-3 **	=	0	X	0	=	0		
Multiple Dependent				X			0		

Large Entity	Small Entity	Fee Description	
Fee Code	Fee Code (\$)	Fee (\$)	
1202	50	2202	25
1201	200	2201	100
1203	360	2203	180
1204	200	2204	100
1205	50	2205	25
SUBTOTAL (2)		(\$ 0)	

\*\*or number previously paid, if greater; For Reissues, see above

## 3. ADDITIONAL FEES

Large Entity	Small Entity	Fee Description	Fee Paid
Fee Code	Fee Code (\$)	Fee (\$)	
1051	130	2051	65
1052	50	2052	25
1053	130	1053	130
1812	2,520	1812	2,520
1804	920*	1804	920*
1805	1,840*	1805	1,840*
1251	120	2251	60
1252	450	2252	225
1253	1020	2253	510
1254	1590	2254	795
1255	2160	2255	1080
1401	500	2401	250
1402	500	2402	250
1403	1000	2403	500
1451	1,510	1451	1,510
1452	500	2452	250
1453	1500	2453	750
1501	1400	2501	700
1502	800	2502	400
1503	1100	2503	550
1460	130	1460	130
1807	50	1807	50
1806	180	1806	180
8021	40	8021	40
1809	790	2809	395
1810	790	2810	395
1801	790	2801	395
1802	900	1802	900
Other fee (specify) _____			

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$ 500)

## SUBMITTED BY

## Complete (if applicable)

Name (Print/Type)	W. R. Duke Taylor	Registration No. (Attorney/Agent)	31,306	Telephone	(248) 641-1600
Signature				Date	March 21, 2005



3-22 OS

AF/3679  
Jewell

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group Art: 3679

Examiner: Aaron M. Dunwoody

Applicants: Loughrin et al

**APPEAL BRIEF**

Serial No.: 09/943,685

Filed: August 30, 2001

For: **DRIVE SHAFT COUPLING**

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Mail Stop Appeal Brief – Patents  
Director of the U.S. Patent and Trademark Office  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Dear Sir:

This is an appeal from the September 2, 2004 final rejection of Claims 1-11 of the above-identified application. No claims have been allowed. A copy of the Examiner's Final Office Action dated September 2, 2004 is attached as Exhibit A.

Claims 1-11 are rejected under 35 U.S.C. Section 103(a) as being unpatentable over Walters et al. in view of Fergusen. No claims have been cancelled. The claims on appeal are Claims 1-11 and are reproduced in Exhibit B.

The references cited by the Examiner, specifically Walters et al. and Ferguson et al. are attached as Exhibit C.

**REAL PARTY IN INTEREST**

GKN Walterscheid GmbH is the real party in interest, being the assignee of the present application.

## **RELATED APPEALS AND INTERFERENCES**

To the best of Applicants' knowledge, no other appeals or interferences are pending which will directly affect or be directly affected by or have a bearing on the Board's decision in the present pending appeal.

## **STATUS OF THE CLAIMS**

Claims 1-11 stand finally rejected (attached as Exhibit B).

## **STATUS OF THE AMENDMENTS**

The claims were amended November 30, 2004. The claims were not entered by the Examiner in his Advisory Action dated December 22, 2004 (attached as Exhibit D). The claims are reproduced in Exhibit B.

## **SUMMARY OF THE INVENTION**

The invention relates to a drive shaft assembly (1) for interconnecting a driving component of an agricultural machine in a driven component of an agricultural implement. The drive shaft assembly (1) includes a first shaft (16) and a second shaft (17). The second shaft (17) engages the first shaft 16 to enable torque transmission and relative axial sliding motion. See Figure 1. A joint component (6) of a universal joint (2) interconnects one of the first and second shafts (16) and (17) to the agricultural driving and driven component. The joint component is both rotatable through a specific range of free rotation (see Figure 3) and is fixed from axial movement relative to one of the second shafts (see Figure 4). The second shaft is attached to the agricultural driving component of the agricultural machine or the agricultural driven component of agricultural implement. A copy of the application is attached as Exhibit E.

## **GROUNDS OF REJECTION**

Whether or not claims 1-11 are obvious under 35 U.S.C. §103(a) over Walters et al. in view of Ferguson.

## **ARGUMENT**

### **BACKGROUND OF THE INVENTION**

The present invention relates to a drive shaft coupling for interconnecting a driving component and a driven component in agricultural machinery.

In many instances, a driving component is required to be operatively connected with a driven component for driving communication. Further, the interconnection must enable a degree of relative motion between the driving and driven components. For example, in many agricultural operations, a tractor is used to tow a secondary agricultural implement. Also, the tractor operatively drives the second agricultural implement. To achieve this, the tractor typically includes an output shaft (driving component) operatively interconnected to an input shaft (driven component) of the secondary agricultural implement. The interconnection is typically achieved by a drive shaft disposed between the two components.

In almost all instances, the tractors are used for a variety of tasks. Accordingly, various types of secondary agricultural implements must be readily engageable with the tractor. Thus, connection and disconnection of the drive shaft assembly is required. Often, the output shaft of the tractor and the input shaft of the secondary agricultural implement are not sufficiently aligned and thus prohibit quick interconnection.

Thus, the present invention relates to a drive shaft coupling that includes a range of rotational motion, or free motion, to enable interconnection between the input and output shafts when they are not of exact rotational alignment. The drive shaft assembly includes a first shaft and

a second shaft engaging the first shaft to enable torque transmission and relative axial sliding motion. A joint component of a universal joint operatively interconnects one of the first and second shafts to one of the agricultural driving or driven components. The joint component is both rotatable through a specified range of free motion rotation and is fixed from axial movement relative to one of the second shafts, the agricultural driving component of the agricultural machine or the agricultural driven component of the agricultural implement. The combination of Walters et al. in view of Ferguson fails to render the invention obvious to those skilled in the art.

It is respectfully submitted that the Examiner is misapplying the references.

The Walters' reference is directed towards a swivel hitch. Walters discloses and claims the swivel hitch construction easily adapted to connect with a pair of draft links or drawbar of a towing tractor. Walters, in passing, in one sentence of the disclosure (column 2, line 47-49 Appendix C) mentions that it may utilize a telescoping shaft. No where, does Walters disclose or suggest a reason or a purpose for the telescoping shaft. The entire Walters' reference discloses and claims a swivel hitch.

The Examiner next combines Walters et al. with Ferguson. The Ferguson reference discloses a driveshaft coupling which uses an elastomeric damper. The coupling is rotated against the elastomeric damper. The elastomeric damper always provides a reactive force to return and to maintain the coupling in a first position. Ferguson fails to disclose or suggest any free motion in the coupling. In fact, due to the elastomeric material, which fills the gap in the coupling, no free motion can or does occur in the Ferguson device.

As claimed, applicant's invention includes free motion to enable the connection of drive components between various implements. The Examiner's combination of references, specifically Walters et al. in view of Ferguson, fail to shed any light on the problem solved by applicant's

invention. Further, this combination fails to disclose or suggest applicant's invention.

The court in re Fritch, 23USPQ2d 1780 (Fed. Cir. 1992) stated that:

"Obviousness cannot be established by combining the teaching of prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under §103, teachings of references can be combined *only* if there is some suggestion or incentives to do so. Although couched in terms of combining teachings found in the prior art, the same inquiry must be carried out in the context of a purported obvious "modification" of the prior art. The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggests the desirability of the modification." At 1783 emphasis original.

Here, there is no motivation or suggestion of the desirability to combine Walters et al. and Ferguson. In fact, the Ferguson reference fails to teach any type of free motion. The Walters et al. reference teaches a swivel hitch adaptable for use with either a tractor drawbar or two-point hitch. Walters et al swivel hitch has no use for teachings of the Ferguson reference.

The Examiner is relying upon hindsight to arrive at the determination of obviousness.

"It is impermissible to use the claimed invention as an instruction manual or template to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated "one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." In re Fritch, supra, 1784.

This is exactly what the Examiner has done in applying his §103 rejection. The Examiner has taken one small piece from the Walters' et al. reference and patched it together with the Ferguson reference. The heart of the Walters et al invention has nothing to do with Applicants' invention. The Ferguson reference fails to teach free motion. It is clear that the Examiner cannot use his hindsight reconstruction in an attempt to render applicant's invention obvious. There is no motivation or suggestion to combine the two references as suggested by the Examiner. In fact, neither reference discloses or suggests the claimed free motion of applicant's invention.

Accordingly, applicant believes the claims be patentably distinguishable over the art decided by the Examiner.

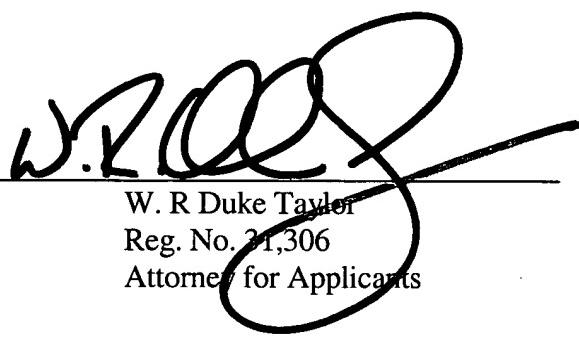
## **CONCLUSION**

Applicant respectfully submit that the Examiner has failed to show that the present invention would be obvious over Walters et al. in view of Ferguson. Further, neither reference discloses the free motion claimed by applicant.

Accordingly, reversal of the final rejection of claims 1-11 and allowance of the claims is respectfully submitted.

Respectfully submitted,  
HARNESS, DICKEY & PIERCE, P.L.C.

Dated: March 21, 2005

By: 

W. R Duke Taylor  
Reg. No. 31,306  
Attorney for Applicants

P.O. Box 828  
Bloomfield Hills, MI 48303  
(248) 641-1600

Attorney Docket No. 6039-000293

Enclosures



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,685	08/30/2001	Terry Loughrin	6039-000293	1262
27572	7590	09/02/2004	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			DUNWOODY, AARON M	
		ART UNIT	PAPER NUMBER	
		3679		

DATE MAILED: 09/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

6039-000293,  
Final OA  
Due 12-2-01  
**Office Action Summary**

Application No.	JWRQT	Applicant(s)
09/943,685	✓RF	LOUGHIN ET AL.
Examiner	Art Unit	
Aaron M Dunwoody	3679	MW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). If no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 17 June 2004.  
2a) This action is FINAL.      2b) This action is non-final.  
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-11 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) Claim(s) \_\_\_\_\_ is/are allowed.  
6) Claim(s) 1-11 is/are rejected.  
7) Claim(s) \_\_\_\_\_ is/are objected to.  
8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
10) The drawing(s) filed on 11 March 2004 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Drawings*

The drawings were received on 6/17/2004. These drawings are approved.

### ***Claim Rejections - 35 USC § 103***

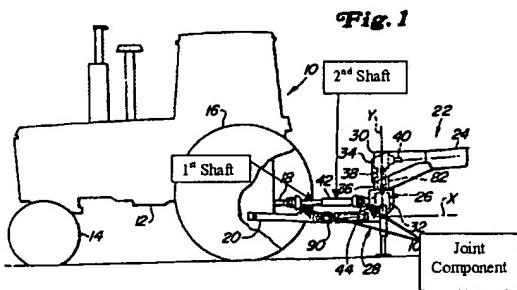
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent 5706901, Walters et al in view of US patent 4551115, Ferguson.

In regards to claim 1, in Figure 1 below, Walters et al discloses a drive shaft assembly (42) for interconnecting a driving component (10) of an agricultural machine and a driven component (22) of an agricultural implement, comprising a first shaft; a second shaft engaging the first shaft for enabling torque transmission and enabling relative axial sliding motion therebetween; and a joint component of a universal joint operably interconnecting one of the first and second shafts to one of the agricultural driving and driven components, the joint component is both rotatable through a specified range of rotation and is fixed from axial movement relative to one of the second shaft, the agricultural driving component of the agricultural machine and the agricultural driven component of the agricultural implement. Walters et al does not disclose the joint component being rotatable through a specified range of free-motion rotation without torque

transmission. Ferguson teaches joint component (see Figure 1 and 3) being rotatable through a specified range of free-motion without torque transmission "to provide a driveshaft coupling of concise configuration capable of damping vibrations" (col. 1, lines 46-50). As Ferguson relates to automobile driveshafts, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a joint component rotatable through a specified range of free-motion without torque transmission to provide a driveshaft coupling of concise configuration capable of damping vibrations, as taught by Ferguson.



In regards to claim 2, Ferguson discloses the joint component including axial grooves and the second shaft includes an end portion having radially extending axial teeth for engaging the grooves and thereby enabling the specified range of relative rotation.

In regards to claim 3, Ferguson discloses the grooves being formed within a bore of the joint component and the teeth extend outward from the end portion, whereby the end portion is received into the bore for enabling engagement between the teeth and the grooves.

In regards to claim 4, Ferguson discloses the grooves being formed in an outer circumferential surface of the joint component and the teeth extend radially

inward from the end portion, whereby the joint component is partially received into the end portion for enabling engagement between the teeth and the grooves.

In regards to claims 5 and 9, Ferguson discloses a ring engaging with a groove of one of the joint component and the second shaft for fixing the joint component and the second shaft from relative axial motion therebetween.

In regards to claim 6, Ferguson discloses the joint component including axial grooves and one of the driving and driven components includes radially extending axial teeth for engaging the grooves and thereby enabling the specified range of relative rotation.

In regards to claim 7, Ferguson discloses the grooves being formed within a bore of the joint component and the teeth extend radially outward from one of the driven and driving components, whereby one of the driven and driving components is received into the bore for enabling engagement between the teeth and the grooves.

In regards to claim 8, Ferguson discloses the grooves being formed along a stub end of the joint component and the teeth extend radially inward within a bore of one of the driven and driving components, whereby the stub end is partially received into the bore for enabling engagement between the teeth and the grooves.

In regards to claim 10, Ferguson discloses the joint component being a universal joint yoke.

In regards to claim 11, Ferguson discloses the second shaft including a stub end interconnected thereto for operably interconnecting the joint component and the second shaft.

***Response to Arguments***

Applicant's arguments with respect to claims above have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron M Dunwoody whose telephone number is 703-306-3436. The examiner can normally be reached on 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P Stodola can be reached on 703-306-5771. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



ERIC K. NICHOLSON  
PRIMARY EXAMINER

amd (N)

**Notice of References Cited**

Application/Control No.

09/943,685

Applicant(s)/Patent Under

Reexamination

LOUGHIN ET AL.

Examiner

Aaron M Dunwoody

Art Unit

3679

Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-			
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)

Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

## CLAIMS ON APPEAL

1. A drive shaft assembly for interconnecting a driving component of an agricultural machine and a driven component of an agricultural implement, comprising:

a first shaft;

a second shaft engaging said first shaft for enabling torque transmission and relative axial sliding motion therebetween; and

a joint component of a universal joint operably interconnecting one of said first and second shafts to one of the agricultural driving and driven components, said joint component is both rotatable through a specified range of free-motion rotation and is fixed from axial movement relative to one of said second shaft, the agricultural driving component of the agricultural machine and the agricultural driven component of the agricultural implement.

2. The drive shaft assembly of claim 1, wherein said joint component includes axial grooves and said second shaft includes an end portion having radially extending axial teeth for engaging said grooves and thereby enabling said specified range of relative rotation.

3. The drive shaft assembly of claim 2, wherein said grooves are formed within a bore of said joint component and said teeth extend outward from said

end portion, whereby said end portion is received into said bore for enabling engagement between said teeth and said grooves.

4. The drive shaft assembly of claim 2, wherein said grooves are formed in an outer circumferential surface of said joint component and said teeth extend radially inward from said end portion, whereby said joint component is partially received into said end portion for enabling engagement between said teeth and said grooves.

6. The drive shaft assembly of claim 1, wherein said joint component includes axial grooves and one of the driving and driven components includes radially extending axial teeth for engaging said grooves and thereby enabling said specified range of relative rotation.

7. The drive shaft assembly of claim 6, wherein said grooves are formed within a bore of said joint component and said teeth extend radially outward from one of the driven and driving components, whereby one of said driven and driving components is received into said bore for enabling engagement between said teeth and said grooves.

8. The drive shaft assembly of claim 6, wherein said grooves are formed along a stub end of said joint component and said teeth extend radially inward within a bore of one of the driven and driving components, whereby said stub end

is partially received into said bore for enabling engagement between said teeth and said grooves.

10. The drive shaft assembly of claim 1, wherein said joint component is a universal joint yoke.

11. The drive shaft assembly of claim 1, wherein said second shaft includes a stub end interconnected thereto for operably interconnecting said joint component and said second shaft.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,685	08/30/2001	Terry Loughrin	6039-000293	1262
27572	7590	12/22/2004	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			DUNWOODY, AARON M	
		ART UNIT	PAPER NUMBER	
		3679		

DATE MAILED: 12/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

6037-000270

• Appeal 1:  
Due 1-2-05 **Advisory Action**  
(Appeal Nop 3-2-05)

Application No.	JWRDT 09/943,685	Applicant(s)
Examiner	JRPN, Aaron M Dunwoody	LOUGHIN ET AL.
		Art Unit 3679

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 30 January 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a)  The period for reply expires 3 months from the mailing date of the final rejection.  
 b)  The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.  
 ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1.  A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2.  The proposed amendment(s) will not be entered because:
  - (a)  they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b)  they raise the issue of new matter (see Note below);
  - (c)  they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d)  they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet.

3.  Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4.  Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5.  The a) affidavit, b) exhibit, or c) request for reconsideration has been considered but does NOT place the application in condition for allowance because: \_\_\_\_\_.
6.  The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7.  For purposes of Appeal, the proposed amendment(s) a) will not be entered or b) will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: 1-11.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

8.  The drawing correction filed on \_\_\_\_\_ is a) approved or b) disapproved by the Examiner.

9.  Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.

10.  Other: \_\_\_\_\_.

  
 Aaron M Dunwoody  
 Examiner  
 Art Unit: 3679

Continuation of 2. NOTE: The reply filed on 11/30/2004 is not fully responsive to the prior Office Action because of the following omission(s) or matter(s): the amended claims are not properly annotated. See 37 CFR 1.111.



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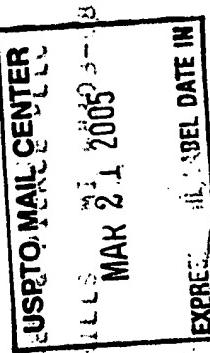
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